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A Brief Summary of Economic Conditions

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WHAT DID American farmers accomplish in the second year United States was at war? In 1943 aggregate production of the 53 principal crops, including fruits, was 9 percent more than the average for the 5 moderately favorable crop seasons of 1937-41. With yields per acre 5 percent better, farmers harvested 4½ percent more acres than the 5-year average. Part of this increase was due to a slightly better than average growing season; to progressive improvement in farming practices; to changed emphasis in the agricultural adjustment program; to deferment of farm workers; to prices and programs which stimulated the planting of larger acreages than farmers were sure they could harvest; to the highest farm prices in history which attracted more risks. On the other hand, farmers faced shortages of skilled help, of supplies, of equipment, together with vexatious delays from wet weather and floods. * * * Considering the difficulties encountered, much of the credit for the size of the 1943 increase must be given to the united efforts of all to push production toward the limits fixed by acres of land, hours of daylight, and human endurance. Farmers and their families worked more hours per week and more Sundays than in any year known to this generation.

Commodity Reviews

SEEDS

ACREAGE of 27 kinds of hay and cover crop seeds harvested in 1943 (totalling 4,862,000 acres) was 5 percent less than the 1942 acreage but 9 percent above the 10-year (1932-41) average.

Generally speaking, 1943 was not a good year for seed production with the result that yields per acre of most seeds not only fell below those of 1942, but were below average. Floods in large areas of the Central and West Central States resulted in delayed planting and rank growth of foliage at the expense of seed production. Drought following in the wake of the floods continued throughout the summer and fall in many sections. To a considerable extent, unfavorable weather for seed production nullified efforts to build up stockpiles of important kinds of seed.

Another factor affecting yields developed in relatively high prices which made it practical to harvest seed crops from many fields that otherwise might have remained unharvested.

Although 9 percent smaller than the 1942 production, the 1943 production of 27 kinds of hay and winter-cover-crop seeds, totalling about 721,000,000 pounds of clean seed, was about 22 percent above average. Production of alfalfa, clover, and lespedeza seed, comprising 38.4 percent of the grand total, was slightly larger than 1942, and 10 percent above the average. Production of grass seeds, making up 25.6 percent of the total, was 72 percent of 1942 production and 76 percent of the average production. Winter-cover-crop seed production, making up 36 percent of the total, was almost equal to the 1942 production and nearly three times the average production.

Farmer and dealer carry-overs of these seeds were 29 percent larger than in 1942 and 48 percent above average. However, when Austrian Winter peas are excluded, 1943 carry-overs are a

little below those of 1942. Larger carry-overs of the grasses and winter cover crop seeds more than offset the 49-percent decline in the carry-over of alfalfa, clover, and lespedeza seed. The 1943 supplies (production plus carry-over) of these seeds, totalling about 975,000,000 pounds of clean seed, were about 2 percent smaller than in 1942, but 28 percent larger than average.

Federal seed-purchase and price-support programs were important stimulants to the production of certain seeds. Purchase programs were authorized for the following kinds: Alyce, Hubam, yellow hop, and white clover; black medic; common, sericea, Kobe, and Tennessee 76 lespedeza; blue lupine, and wild winter peas. Price-support programs covered the following: alfalfa; alsike, Ladino, red, and biennial white, yellow, and mixed sweetclover; Bahia grass, Bermuda grass, smooth bromegrass, Buffalo grass, Dallis grass, blue grama, side-oat grama, meadow fescue, orchard grass, Sudan grass, timothy, and crested, slender, and western wheat-grass.

The December 15, 1943, prices received by growers for alfalfa, clover, and lespedeza seed averaged nearly 50 percent higher than a year earlier and nearly twice the 10-year average. On the same date growers received about 50 percent more for hay than in 1942, and 75 percent more than average. For soybeans, corn, oats, barley, and wheat they received about 40 percent more in 1943 than in 1942 and twice the 10-year average.

Based on these comparisons, it would seem that prices received by growers for these seeds, although much above average, are about in line with those of other competing commodities. Ceiling prices at growers', processors', wholesalers', and retailers' levels have been set by the Office of Price Administration for

five kinds of field seeds—alfalfa, red clover, alsike clover, sweetclover, and timothy.

High prices of most seeds will tend to hold down demand for them. Expected increased imports and decreased exports are likely to ease the demand situation somewhat. Imports for the fiscal year ending June 30, 1944, may exceed those of the preceding year by 50 percent, while exports may decline about one-third.

Carry-overs of most seeds at the end of the 1944 spring and fall planting seasons are likely to be the smallest in many years, if not the smallest on record. Production goals for 1943 set for 18 kinds of field seeds totaled about 880,000,000 pounds. Production of these seeds in 1943 failed to achieve the goals by 21 percent, falling short most prominently in the case of the legumes (35 percent). Except for Austrian Winter peas, production of individual winter cover crop seeds did not achieve the goals; however, the record production of Winter peas resulted in a total winter cover crop production 13 percent higher than the goal. Grass-seed production was 24 percent short of achieving the goal.

Notwithstanding the fact that the 1943 production of field seeds fell well below the 1943 goals, 1944 goals have been set at approximately 1943 levels for most of these seeds, as well as for Sudan grass. This was done not only to meet the needed increases for planting hay, pasture, and cover crops but also to build up reserves for use if serious seed-crop failures develop over wide areas in 1944 or 1945 or if the demands of the United Nations prove to be greater than expected.

The Government plans to further strengthen its several programs to stimulate production not only of common strains of important kinds of seeds but also of improved strains from which more hay or pasture can be obtained from fewer acres. This development is among the objectives of the newly created Committee on Seed Production Programs.

WHEAT AND RYE

WINTER wheat production in 1944 was estimated December 1 at 526,957,000 bushels—2.6 million bushels less than the 1943 crop. The acreage, 47,127,000 acres, is one-fourth more than the winter wheat acreage sown for the crop of either 1942 or 1943 and only 2 percent less than the 1932-41 average. Yield was forecast at 11.2 bushels per seeded acre as compared with 14.0 in 1943 and a 10-year (1932-41) average of 11.4.

In much of the important Great Plains area, the autumn was dry and wheat went into the winter in a condition that indicated heavy abandonment.

The acreage of rye seeded for 1944 harvest, 4,922,000 acres, was 15 percent below the acreage seeded for 1943 harvest. The condition of rye on December 1 was 10 points below the condition a year earlier, but 1 point above the 1932-41 average for December 1.

PIG CROP

HOG production will decline in 1944 from an all-time peak in 1943, according to the December Pig Crop Report. Farmers now plan to have 10,155,000 sows farrowing in the spring season of 1944 (December 1 to June 1)—16 percent fewer than the record number farrowing in the spring of 1943.

Farmers expected, last June, to breed 25 percent more sows for farrowing in the fall of 1943 than the number farrowing in the fall of 1942. But owing to decreasing feed supplies and an outlook for less favorable hog-feed price relationships the actual increase was only 12 percent. The fall pig crop, 47,831,000 head, was still the largest ever produced.

The combined spring and fall pig crop of 1943 is estimated at 121,847,000 head—17 percent more than the combined crop of 1942 and 67 percent above the 1932-41 average. Farmers had a much larger number of hogs over 6 months old (including brood sows)

on hand December 1 than the record number a year earlier.

FEED

ALTHOUGH 1943 feed grain production was large in total, it is not evenly distributed geographically, nor is it large in proportion to livestock and poultry numbers. Production of the 4 principal feed grains in 1943 totaled 115 million tons—exceeded only in 1942 and 1920. The supply per unit of livestock is less than in any year since the drought, but will probably be sufficient for normal feeding if closely and efficiently utilized. However, the rate of milk production per cow and egg production per layer which had been running considerably above normal, reflecting a high rate of feeding, have already shown a tendency to decline. Because the movement of corn out of surplus areas is smaller than usual in relation to the total corn crop, hog as well as dairy and poultry producers outside the Corn Belt are having difficulty in maintaining the high rate of production reached early in 1943.

The total supply of all feed concentrates is estimated at 169 million tons, compared with 172 million tons (revised) in 1942-43. Included in the totals are 11.4 million tons of high-protein feeds in 1943-44 compared with 11.2 million tons last season.

With increased movement of wheat from Canada by rail in prospect for this winter, the total quantity of wheat to be fed in the 1943-44 crop year now seems likely to exceed 15 million tons, compared with less than 10 million tons in 1942-43.

The 99,543,000 ton hay crop is the second largest produced, and will probably be sufficient for normal feeding. Local shortages of both grain and roughage are reported in the Southwest where production of grain and forage was reduced by drought, and in regions where farmers are having difficulty in making their usual purchases of concentrates.

The 1943 corn crop, second largest on record, totals over 3 billion bushels. Yield per acre was mostly above average with the exception of Arkansas, Oklahoma, Maryland, Delaware, New Jersey, and Pennsylvania, where the drought was severe.

Effective December 6, the Office of Price Administration raised the ceiling price on corn about 9 cents a bushel at Chicago, and froze prices of oats, barley, and grain sorghums for 60 days, pending issuance of a permanent regulation for these feeds. On the same date, the War Food Administration announced a series of steps to bring feed grain prices more nearly in line with each other, to encourage as efficient use of the grains as possible, and to make more feed available to the deficit areas. The steps include elimination of the subsidy the Commodity Credit Corporation has been paying on corn moving from surplus to eastern and southern deficit areas, an increase of 20 cents a bushel in the price of Government feed wheat, and an offer to buy corn throughout December at the old ceiling price in 150 counties on the fringe of the Corn Belt where the new ceilings on corn are below the old ceiling prices.

The WFA also announced that beginning December 1, the CCC would lend farmers in specified Corn Belt counties, who had met 90 percent of their war-crop goals, from 81 to 97 cents a bushel on 1943 corn.

FATS AND OILS

SIGNIFICANT changes occurred in 1943 in the way in which fats were used. Exports to our Allies were roughly 50 percent greater than in 1942, and a substantially larger quantity was used for military purposes—both to feed our men and to manufacture the implements of war. Civilian consumption of food fats was reduced 5 to 6 percent.

Estimates of total production of fats and oils from domestic materials in the crop year 1943 have been reduced to about 11.2 billion pounds,

principally because of a reduction in indicated soybean and peanut production.

Production of soybeans in 1943 is now estimated at 196 million bushels and production of peanuts at 2,562 million pounds—an increase over 1942 of 5 percent in soybeans and 16 percent in peanuts. The soybean production estimate for 1942 has been revised to 187 million bushels. Flaxseed production in 1943, estimated at 52 million bushels, was 27 percent greater than in 1942. Cottonseed production in 1943 is estimated at 5.1 million tons, 11 percent less than last year.

Expansion in acreage of flaxseed and soybeans more than offset the moderately reduced yields per acre. Peanut acreage in 1943 was materially increased, and because of unusually high yields per acre in the southeastern areas, the national average yield of 649 pounds per acre was slightly greater than in 1942, in spite of reduced yields in the Virginia-Carolina and southwestern areas. Cottonseed acreage and yield per acre were both somewhat lower in 1943 than in 1942.

Stocks of primary fats and oils on October 31 amounted to 1,960 million pounds (crude basis), 73 million pounds more than the seasonal low point reached a month earlier. Inventories will increase until early spring, and will probably continue at a level higher than a year earlier.

Creamery butter production declined seasonally in November, and continued about 15 percent under a year earlier. Output of lard in federally inspected plants increased sharply as a result of increasing hog slaughter.

Export requirements for fats and oils may increase at the end of the European war. In the 12 months after cessation of hostilities, available supplies outside the United States will not be sufficient to meet even three-fourths of the pre-war requirements of continental Europe for food

fats. The supply situation although expected to be somewhat easier in the next few months, may again become very tight before the end of 1944.

INCOME

INCOME payments in 1943 are now estimated at 142 billion dollars. During the first half of 1944 these payments are expected to rise even higher than in recent months.

Increased production rather than higher prices is believed to be the main factor in the tremendous rise in income payments during the last 2 years. Recently, however, there has been some decline in the rate of increase in production, and there are indications that total industrial production may level off in the next few months. Non-agricultural employment declined steadily in 1943. Increased production of some goods is offset by decreased output of other types. Also, contract cancellations and reductions of Government purchases are assuming greater importance, and more conservative buying and inventory policies are in evidence.

To date, Federal budget receipts this fiscal year have surpassed expectations at the beginning of the fiscal year, and expenditures have been less than anticipated. Receipts will probably total 41 billion dollars, 3 billion more than the original forecast. War expenditures are estimated at 92 billion, or 8 billion less than expected. Non-war expenditures are likely to be 6 billion, as first estimated.

A total deficit of about 57 billion during the current fiscal year is forecast, instead of the 68 billion formerly predicted. Since nearly 8 billion dollars must be spent monthly during the remainder of the fiscal year if the reduced total for war expenditures of 92 billion dollars is to be achieved, there is likely to be little let-up soon in restrictions on manufacture of civilian goods.

Government and export demands, subsidies, taxes, and rationing, as well as increased consumer income, are

Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid, interest, and taxes	Buying power of farm products
1942			
January.....	149	145	103
February.....	145	147	99
March.....	146	150	97
April.....	150	150	100
May.....	152	151	101
June.....	151	151	100
July.....	154	152	101
August.....	163	152	107
September.....	163	153	107
October.....	169	154	110
November.....	169	155	109
December.....	178	156	114
1943			
January.....	182	157	116
February.....	178	159	112
March.....	182	160	114
April.....	185	162	114
May.....	187	163	115
June.....	190	164	116
July.....	188	165	114
August.....	193	165	117
September.....	193	165	117
October.....	192	166	116
November.....	192	167	115
December.....	197	168	117

¹ Ratio of prices received to prices paid, interest, and taxes.

largely responsible for changing demand for farm products. While Food Distribution Administration purchases of agricultural products for lend-lease have declined seasonally since the mid-year, they are still a good deal higher than a year ago. Purchases during the period January-October 1943 totaled 1.6 billion dollars, a 45-percent increase over the same period in 1942.

While wholesale prices of nonagricultural commodities have risen gradually, being now about 20 percent higher than at the outbreak of war in 1939, wholesale prices of farm products have decreased since June from a point two-thirds higher than in the 1935-39 period. Recent developments which tend to impede the decline are higher ceiling prices for corn and Burley tobacco.

The index of prices paid by farmers, including interest and taxes, was nearly 8 percent higher in December 1943 than a year earlier.

POULTRY AND EGGS

THE favorable egg-feed price relationship which is in prospect for the flush period of egg production will encourage farmers to keep as many hens as they can house and feed in the first part of 1944.

Primarily because of larger requirements for drying, the out-of-storage movement of frozen eggs has averaged the largest on record throughout the current season. During November the net withdrawal of frozen eggs was 15 million pounds larger than in November 1942, a 28-percent increase.

The weakened demand for baby chicks, which first became generally noticeable in mid-October, continued through November. To meet the 1944 national goals, it is estimated that 8 to 12 percent fewer chicks from commercial hatcheries will be needed than were produced in 1943.

Total commercial hatchery production for the first 11 months of 1943 totaled 1,405,820,000 chicks, a 20 percent increase over the same period in 1942. November production was 23,533,000 chicks, 7 percent less than November 1942.

Marketings of chickens have continued much larger than a year earlier. Civilian consumption has been at record levels, even though storage stocks have been accumulating at a faster rate than in 1942. On December 1, storage stocks of poultry totaled 197 million pounds, a record high for that date.

Production of turkeys has been relatively stable during the war, in contrast to sharp increases for other poultry items. Turkey production was limited by especially short supplies of hatching eggs in 1943. Prices were bid to relatively high levels, which may encourage farmers to keep larger breeding flocks for 1944 egg production. However, the expected short feed supplies will tend to restrict turkey production in 1944.

Civilian supplies of poultry will be at the seasonally low level from Febru-

ary through April. In the first half of 1944, supplies may be slightly larger than a year earlier, but are likely to be considerably short of demand at ceiling prices. A year-end order of the War Food Administration prohibits commercial sales and uses of storage chicken, by holders of 3,000 pounds or more at the time the order was issued, until 70 million pounds have been purchased by the armed forces and other Government agencies.

Civilian supplies of eggs last fall were somewhat larger than a year earlier, and in the first half of 1944 are likely to average at least as large as in the corresponding period of 1943.

WOOL

ALMOST complete removal of Government restrictions on civilian wool use through an amendment to WPB Conservation Order M-73 issued

on November 19 is expected to result in a marked increase in production of all-wool civilian fabrics. Production for civilian use has increased sharply in recent months. While approximately the same quantity of wool cloth is being manufactured, most recent reports indicate that only 41 percent of the orders placed through August this year were intended to meet military requirements. In 1942 civilian sales amounted to 41 percent of the total.

The decline in production of military woolen goods is expected to reduce raw wool requirements, since on the average less wool per yard is utilized in civilian goods. Mill consumption in most months of 1943 thus far reported has been larger than in the corresponding month of 1942. The general trend has been downward since March, however, and this will probably continue largely because of decline in employment in the mills, the effects of which

Prices of Farm Products

[Estimates of average prices received by farmers at local farm markets, based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State]

	5-year average		December 1942	November 1943	December 1943	Parity Price, December 1943
	August 1909-July 1914	January 1935-December 1939				
Wheat (bushel).....dollars..	0.884	0.837	1.103	1.37	1.43	1.49
Corn (bushel).....do.....	.642	.691	.802	1.05	1.11	1.08
Oats (bushel).....do.....	.399	.340	.474	.752	.769	.670
Rice (bushel).....do.....	.813	.742	¹ 1.675	1.83	1.83	1.37
Cotton (pound).....cents..	12.4	10.29	19.55	19.40	19.85	20.83
Potatoes (bushel).....dollars..	.697	.717	¹ 1.116	1.33	1.35	1.21
Hay (ton).....do.....	11.87	8.87	10.46	14.50	15.20	19.90
Soybeans (bushel).....do.....	² 1.96	.954	1.59	1.80	1.81	¹ 1.61
Peanuts (pound).....cents..	4.8	3.55	6.19	7.12	7.10	8.06
Apples (bushel).....dollars..	.96	.90	1.43	2.24	2.64	1.61
Oranges, on tree, per box.....do.....	⁴ 1.81	1.11	2.85	2.24	2.24	1.95
Hogs (hundredweight).....do.....	7.27	8.33	¹ 13.26	12.90	12.80	12.20
Beef cattle (hundredweight).....do.....	5.42	6.56	¹ 11.27	11.30	11.40	9.11
Veal calves (hundredweight).....do.....	6.75	7.80	¹ 12.94	12.70	12.70	11.30
Lambs (hundredweight).....do.....	5.88	7.79	¹ 12.49	11.90	12.10	9.88
Butterfat (pound) ¹cents..	26.3	29.1	48.9	50.9	51.0	⁴ 48.4
Milk, wholesale (100 pound) ²dollars..	1.60	1.81	¹ 3.06	¹ 3.39	¹ 3.40	² 2.94
Chickens (pound).....cents..	11.4	14.9	20.5	24.3	24.4	19.2
Eggs (dozen).....do.....	21.5	21.7	39.7	47.1	44.9	⁴ 44.0
Wool (pound).....do.....	18.3	23.8	¹ 40.0	40.7	40.5	30.7
Tobacco (pound):						
Burley, type 31.....do.....	³ 22.2	19.1	43.0	-----	45.5	30.6
Air-cured, dark, type 35-36.....do.....	³ 10.9	8.6	13.2	-----	25.7	11.8
Sun-cured, type 37.....do.....	³ 14.6	11.4	21.0	-----	40.0	15.8

¹ Revised.

² Comparable base price, August 1909-July 1914.

³ Comparable price computed under Section 3 (b) Price Control Act.

⁴ Comparable base price, August 1919-July 1929.

¹ Does not include dairy feed payments since November 1943.

² Adjusted for seasonality.

³ Preliminary. ⁴ 5-season average, 1934-38.

⁵ 10-season average, 1919-28.

have not been offset by longer working hours.

Wool prices have strengthened in recent months and are now at or near ceiling levels. The Commodity Credit Corporation, which holds most of the unsold balance of the 1943 clip, is offering these wools at ceiling prices.

Greater production of woollen fabrics for civilian use has brought a strong demand for foreign wools, which are less expensive than comparable grades of domestic wool. Larger-than-usual purchases of Australian wools were made this season, owing to the fact that they are lower in price than comparable grades of domestic wools. Foreign wool accounted for 68 percent of the September 1943 consumption, compared with slightly more than 50 percent in the 2 preceding years.

Use of apparel wool on a greasy shorn and pulled basis totaled 821 million pounds the first 9 months of

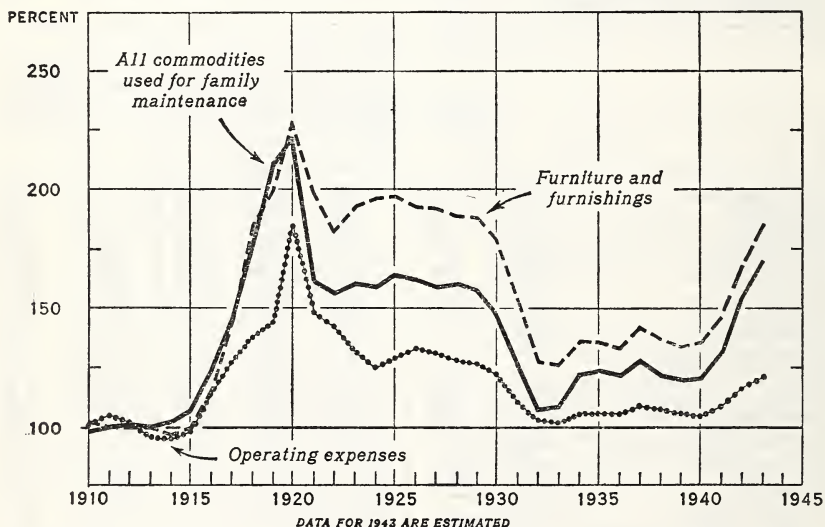
1943, as compared with 797 million pounds during the same period of 1942. Carpet wool consumption declined in 1943, totaling 32 million pounds (grease basis) through September 1943 as compared with 48 million pounds in the first 9 months of 1942.

The January 1, 1944 sheep numbers on farms may be substantially less than the 53 million head previously forecast because of unusually large sheep liquidation in recent months. Shorn wool production in 1944 may therefore be somewhat smaller than in either 1943 or 1942.

Unless the large slaughter of sheep and lambs continues through 1944 the pulled wool production may be reduced below 1943 and 1942. But the number of shearlings used by the Army in 1944 may be less than in 1943 so that the wool from these pelts probably will be pulled.

PRICES PAID BY FARMERS FOR OPERATING EXPENSES, FURNITURE AND FURNISHINGS, AND FAMILY MAINTENANCE, UNITED STATES, 1910-43

INDEX NUMBERS (1910-14=100)



U. S. DEPARTMENT OF AGRICULTURE

BUREAU OF AGRICULTURAL ECONOMICS

Nutritive Value of U.S. Food Supply, 1930-43

PRODUCTION of food has shown marked reactions to the economic crises since 1930. The lowest recorded point in production was reached in 1935, the direct result of the drought. In every year since that time, the per capita production of food has increased over the preceding year, breaking all previous records in 1941, 1942, and again in 1943. Per capita production in 1943 totaled about 125 percent of the 1935-39 average, over 30 percent greater than the low point of 1935.

Consumption of food per capita in 1935, measured by volume, was at the low point of 96 percent of the 1935-39 average, while the peak was reached in 1941. However, the high point in consumption was only 15 percent above the low point, in contrast to a 30 percent difference between the high and low points in production during the same period.

Consumption of "luxury" products, such as meats and eggs, reached a low point in 1934 and 1935, as a result of drought conditions. There were compensating increases in the consumption of potatoes, beans, and nuts, while the consumption of fruits and truck crops increased gradually.

As a result of high incomes and relatively plentiful supplies, the volume of food consumption reached its peak in 1941. Consumption of dairy products, meats, fish, and poultry, beans and nuts, truck crops, sugar and sirups were all at the highest point since 1930, while potatoes had fallen to the lowest level ever recorded. Consumption of fruits, fats and oils, and eggs decreased slightly, and the consumption of grain products remained at the level prevailing, with slight variations, since 1930.

In 1942, the demand for food supplies for war purposes began to be felt, and although the consumption of fresh milk, poultry, eggs, and truck crops, continued to rise, there were noticeable reductions in the consumption of

meats and fish, beans and nuts, fruits, fats and oils, and the imported commodities, coffee, tea, cocoa, and spices. In spite of the adjustments necessitated by wartime conditions, there was less than a 3-percent decline from 1941 in the volume of foods consumed.

In 1943, with nearly one-fourth of our food supply allocated to war needs and about one-half of the civilian supply under ration control, civilian consumption declined only about 2 percent below the 1942 level, but was 10 percent above the low point reached in 1935. Increases in the consumption of fresh milk, poultry, eggs, potatoes, beans and nuts, and grain products, some of which are now enriched with iron and the B vitamins, offset to some extent the curtailment in civilian supplies of meats, fruits and vegetables, fats and oils, and sugar.

NUTRITIONAL analysis of the average diet for each year beginning with 1930 indicates that variations from year to year have been relatively smaller than the variations in production and volume of consumption. Changes in consumption of some of the major groups of foods have been partially compensated for by changes in other groups of similar nutritive content. On the whole, the nutritive content of the average diet has shown some improvement since the middle 1930's, despite the decline in consumption during the past 2 years.

Even if the effects of enrichment of grain products are not included in this analysis, nutritive value of the over-all food supply for the last three years has remained fairly constant, at a level somewhat above that for 1935-39. For iron and the B vitamins, the nutrients included in the enrichment program, the total quantities in the 1943 national diet were considerably higher than was available in 1941 or even in 1942 when enriched bread and flour first became popular.

Since the number of calories a person can use day in and day out is limited unless he wishes to gain weight, it is not surprising that the relative food energy or calorie value of the per capita civilian food supply has remained fairly constant since 1930. In 1941, there were 6 percent more calories available in the civilian food supply than in 1935-39. But it is possible that in 1941 there was more wastage of foods than in the comparatively less prosperous earlier years or since the outbreak of war when food conservation is being stressed. Since the same waste factors have been used for each year in these calculations, the higher figure for 1941 may be slightly exaggerated. The civilian food supplies for 1942 and 1943 furnished fewer calories than in 1941, principally because of the decrease in consumption of sugar.

Protein consumption was very stable during the 1930's but has been at a higher level since 1940. Estimates for 1943 place protein in the food supply at 8 percent above the 1935-39 level. Throughout the 14 years from 1930

to 1943 between 56 and 60 percent of the total protein was derived from animal sources, i. e., from meat, poultry, fish, milk, and eggs. This is a relatively higher proportion from animal sources than in the diets of most of the countries, even before the war.

THE VITAMIN A value in the national food supply has remained remarkably constant during the last 14 years. As the table indicates, about half of the vitamin A value of the average diet is furnished by plant products, especially the green and yellow vegetables. The remainder is supplied by animal products such as eggs, milk, butter, and liver. Vitamin A is essential to the growth and development of children and also to the maintenance of health at all ages. Shortage of this vitamin in the diet results in injury or deterioration of the mucous or surface membrane of the body and may lower resistance to disease. "Night-blindness" is also a result of too little vitamin A in the diet.

Vitamin C has shown a definite upward trend since 1930 although there

Daily Nutritive Value Per Capita of Civilian Food Supply and Contribution of Specified Food Groups, 1930-39 Average

Food group	Food energy	Protein	Calcium	Iron	Vitamin A	Vitamin C (ascorbic acid)	Vitamin B ₁ (thiamine)	Riboflavin	Niacin
Total from all sources, per capita per day (uncooked basis).....	Calories 3,260	Grams 89	Grams 0.86	Milligrams 13.9	International units 6,550	Milligrams 93	Milligrams 1.81	Milligrams 1.97	Milligrams 17.8
Percentage of total contributed by each food group									
Animal products.....	44	58	80	43	46	9	60	76	63
Milk, cheese, ice cream.....	12	22	75	8	17	7	8	46	3
Eggs.....	2	6	3	8	6	0	5	10	(?)
Meat, poultry, fish.....	10	28	2	25	11	2	43	19	58
Fats and oils ¹	20	2	(?)	2	12	0	4	1	2
Vegetable products.....	56	42	20	57	54	91	40	24	37
Potatoes.....	4	3	3	8	15	21	8	4	11
Dry beans, peas, nuts.....	2	5	2	9	(?)	0	6	3	5
Tomatoes, citrus fruit.....	1	1	2	2	7	24	3	1	2
Green, yellow vegetables.....	1	2	3	5	21	28	4	3	2
Other vegetables, fruit.....	4	2	4	8	11	18	4	6	4
Grain products.....	27	29	5	22	(?)	0	15	7	13
Sugar, sirups.....	16	0	1	2	0	0	(?)	(?)	0
Cocoa, chocolate.....	1	(?)	(?)	1	0	0	(?)	0	0
Total.....	100	100	100	100	100	100	100	100	100

¹ Includes butter, bacon, salt pork, and some vegetable oils.

² Less than 0.5 percent.

has been a tendency toward a leveling off in the forties. This upward trend is associated with increasing consumption of citrus fruit and tomatoes, which are rich in this vitamin. Estimated per-capita intake of vitamin C has increased 15 percent since 1930 and the increase in consumption of citrus fruit and tomatoes has been approximately 50 percent. The largest single increase has been in the consumption of oranges. The per-capita quantity available for 1943 was practically double that for 1930. Tomatoes and citrus fruit furnished 30 percent of the total ascorbic acid in the food supply in 1943 as compared to 20 percent in 1930 and an average of 24 percent in 1930-39.

Vitamin C, whose chemical name is ascorbic acid, is widely known as the vitamin which prevents scurvy. But it is also less spectacularly needed by the minute blood vessels which are all through the body. Sufficient vitamin C in the diet prevents hemorrhages or oozing of the blood from these vessels and also helps to keep a healthy condition of the teeth and gums.

QUANTITIES of two important nutrients in the per capita civilian food supply have increased steadily since 1934. These nutrients are calcium and riboflavin (sometimes called either vitamin B₂ or G). The increases in the quantities of calcium and riboflavin available in the civilian food supply since 1934 have been largely due to higher consumption of milk and milk products other than butter. Milk (equivalent) consumption has increased by 25 percent since 1934; total calcium intake by 20 percent; and total riboflavin intake by 15 percent (excluding that added by enrichment of flour and bread during the latter quarter of 1943). Since three-fourths of the total dietary calcium and almost one-half of the riboflavin is derived from milk and milk products, these proportionate increases are not surprising. If the consumption of other foods remains about the same, it follows that a 5-percent increase in

milk consumption will bring about approximately a 4-percent increase in the national supply of food-calcium available and a 2- or 3-percent increase in the total riboflavin in foods (not counting synthetic products added).

Increases in the amounts of calcium and riboflavin available in the national food supply are particularly welcomed by nutritionists because studies have shown that these two nutrients are most often deficient in the diets of many people, especially those not living on farms. Calcium is important to the body as a builder and maintainer of bone and teeth and is also needed in many of the fluids which control the body's involuntary activities. Riboflavin promotes growth and is essential for normal nutrition at all ages. Insufficient quantities of riboflavin for any length of time may be followed by digestive disturbances, nervous disorders, some types of "eye-strain," and lowered general resistance.

IRON, although an important nutrient, is usually fairly well supplied in average mixed diets. Because iron is supplied by a variety of different foods and since no one food or group of foods makes an outstanding contribution of iron to the national food total, there was little variation in the per capita quantity available until 1942.

Late in 1941 under the enrichment program, there was placed on the market white bread and white flour to which extra iron, vitamin B₁, and niacin had been added. Gradually during 1942 more and more of the white bread and flour sold was enriched. In October 1943, larger amounts of iron, vitamin B₁, and niacin and extra riboflavin, another B vitamin were added. Since January 1943, by War Food Administration order, nearly all commercial white bread has been enriched.

The enrichment program has affected the average per-capita supply of iron in the diet and also to a greater extent the supply of vitamin B₁ or thiamine. The quantities available in the food supply decreased from 1932

to 1935, but in 1936, largely due to a sizable increase in pork production, the trend was reversed and started upward, reaching a high peak in 1943. Without enrichment, however, there would have been a leveling off in the early 1940's. The average quantity of vitamin B₁ available in civilian food during 1943 was 33 percent higher than in 1935-39, and 24 percent higher than it would have been without the enrichment of grain products. Because the minimum quantities of the extra iron and B vitamins to be added to enriched bread and flour were increased beginning October 1, 1943, the estimated benefits of enrichment will be even greater in 1944.

As a result of the enrichment of white bread and flour, the grain products group as a whole now furnishes about 30 percent of the total thiamine in the average per capita food supply, compared to about 15 percent prior to enrichment. Somewhat larger proportions of iron, riboflavin, and niacin are also furnished by grain products than in recent years, although not as great as for vitamin B₁.

Nutritionists and physicians stress the need for adequate vitamin B₁ in the diet because insufficient quantities may be the cause of a generally poor physical condition which usually shows up in a poor appetite and often in certain nervous disorders. Although it is usual to associate beriberi with B₁ deficiency, actually few cases of beriberi are found in this country today. Niacin or nicotinic acid is known as the pellagra-preventing vitamin, but other vitamin deficiencies usually exist in the diets of pellagrins.

THE improvement in the nutritive value of the over-all civilian food supply for recent years is supported by surveys of the food consumed by families at different income levels. Comparison of dietary studies made in 1936 and in 1942 indicate that in 1942 families were consuming more milk, eggs, fruit, and vegetables, i. e., the protective foods—than in 1936.

Higher incomes and nutrition education have both combined to provide better nutrition for most persons in this country.

However, we should not lose sight of the fact that there are still many persons in this country whose incomes have not risen while the cost of food has gone up, and that there are also many persons whom the nutrition education program has not yet reached.

It has been estimated that in the spring of 1942, before rationing and before food shortages, probably at least one-third of American families had diets deficient in calcium, riboflavin, or both, compared to recommendations of the National Research Council. Smaller proportions of the families had diets deficient in the other nutrients. Although these estimates show improvement since 1936, they indicate that there are still many people in this country whose food does not measure up to recommended dietary practice. Therefore, just because the over-all average figures indicate that this country is adequately fed, we must not relax our efforts to produce more food and to see that everyone has the means and the knowledge to buy an adequate diet.

Still more of the protective foods especially need to be produced. If all families were to follow a moderate-cost food plan which would assure good nutrition, at least a fifth more milk and citrus fruit and tomatoes would be needed than were available in 1943, and twice as large quantities of green and yellow vegetables.

In the past few years we have provided food for the best-fed armed services in the world and have shipped large quantities of food to our allies. We have already begun to send food to the reoccupied countries. In spite of these unusual demands on our food supply, we have been able to make considerable progress in improving our national diet.

G. LOIS NELSON, BAE, and FAITH CLARK, *Bureau of Human Nutrition and Home Economics*

Farm Fire Losses in 1943

THE 1943 fire loss on farms in the United States was about \$90,000,000, an increase of 12½ percent over 1942, according to a recent estimate by the Committee on Farm Fire Protection of the National Fire Protection Association. In 1942 the farm fire loss was placed at \$80,000,000.

For several years prior to 1943 the farm fire loss declined in terms of dollars notwithstanding an annual increase in the dollar volume of the total national fire loss, of which the farm loss is a part. The national fire loss has been estimated for each year since 1916 by the National Board of Fire Underwriters on the basis of loss reports received by the Actuarial Bureau of this Board. These reports come to the Bureau only when affiliated and reporting insurance companies are involved in the fire loss. Hence, the data collected are incomplete—particularly in the case of losses of farm property, much of which is insured in nonreporting farm mutuals, and substantial parts of which are not insured at all.

Uninsured farm property is most common in the South, where commercial insurance rates are high, and where farm mutual insurance is least developed. In addition to the annual fire-loss estimates, the National Board also issues monthly fire-loss figures, and in all these estimates it makes a rough allowance for unreported and uninsured losses.

Although for reasons indicated, the National Board figures are by no means exact, they are the best available; and no doubt reflect the change in the dollar volume of the national loss from year to year with substantial accuracy. According to these estimates, the national fire loss in 1916 was approximately 258 million dollars. From that point it increased by tens of millions nearly every year until 1926 when the annual loss reached an all-time high of 562 million dollars.

Following this peak in the annual fire loss an encouraging 10-year decline was recorded; and for 1935 the estimated loss was 235 million dollars or only about 42 percent of the 1926 loss.

In 1936 a new upward trend appeared, and the estimated national loss beginning with that year has been as follows:

	<i>Million dollars</i>
1936.....	267
1937.....	255
1938.....	258
1939.....	275
1940.....	286
1941.....	304
1942.....	314

No estimate for the completed year 1943 is yet available. But, from the monthly figures released by the National Board of Fire Underwriters, it is evident not only that the 1943 loss will show another increase but that it will be one of the biggest increases since 1935.

ESTIMATES for that part of the annual fire loss that occurs on American farms have back of them even less complete data than is true for the national figures. These figures may in fact involve substantial margins of error. It may be said of them, however, as was said of the National Board figures, that they are the best available.

For some years prior to 1940, the estimates of the Committee on Farm Fire Protection for the annual farm fire loss stood at about 100 million dollars. For 1940, the estimate was reduced to 95 million. For 1941, it was again reduced by 5 million, the estimated loss for that year being placed at 90 million. For 1942, as already indicated, the estimate was placed at 80 million.

In each of these years it appears that the committee, in arriving at its estimate, had fairly good grounds for

the adjustments made in the annual figure, but the base to which the change was applied has never been highly satisfactory and its history is too long to be presented here. Perhaps the principal weakness in the evidence upon which the percentage of increase or decrease has been determined lies in the fact that the committee has habitually met about the first of December and made its estimate for the current year on the basis of about 10 months' reported experience. In partial justification of this practice, it may be pointed out that farm-fire-loss totals are not affected by unexpected conflagrations such as occasionally cause sudden bulges in urban loss figures. An attempt similarly to estimate the urban fire loss for the year on the basis of 10 months' experience would involve a much larger possibility of error.

TO review the evidence upon which the actions of the committee were based in each of the recent years for which figures have been given would be tiresome and perhaps useless. The evidence in each case, however, was essentially on a par with that on the basis of which the estimate for 1943 was raised by 10 million which made it the same as the 1941 figure of 90 million. This 1943 evidence may be briefly outlined as follows.

In the first place, the National Board's monthly loss figures for the first 10 months of 1943 showed an increase of about 36½ million, or 14½ percent, over those for the corresponding months of 1942. This would not necessarily mean an increase in the farm fire loss but the size of this increase, in the absence of any pronounced city conflagration, suggested a general increase. More tangible was the evidence that a group of large stock insurance companies, with special farm departments, found an average increase in their farm fire losses for the first 10 months of 1943 of something over 15 percent compared with their last year's losses. Finally, a sample

survey of the loss experience of 45 relatively large farm mutual fire-insurance companies fairly well scattered over the United States revealed that these mutuals, with an aggregate of nearly 1½ billion dollars of insurance in force, showed a net weighted average increase of 14.4 percent in their losses for the first 10 months of 1943 over the losses for the corresponding period of 1942. After rough allowances for a number of less tangible elements in the evidence—including the fact that the sample data showed that loss increases had occurred principally in the States of the Middle West and that several of these States were somewhat disproportionately represented in the sample—the net indicated increase was placed by the committee at the rather conservative figure of 12½ percent.

THE estimated 10-million-dollar increase in the farm fire loss of 1943 above that of 1942 represents, of course, an increase in the dollar volume of loss and this should not be interpreted to mean a corresponding increase in the physical amount of farm property burned. The prices of things that farmers buy for living and for production purposes were about 10 percent higher in July 1943 than in July 1942 and farm wages were 36 percent higher. Insurance losses often call for adjustments that involve material and wages in about equal amounts. In such instances a given loss which was properly adjusted for \$100 in July of 1942 would call for \$123 in July 1943. To take a more striking example of how price changes may affect insurance losses, an average milk cow in the United States which was killed by fire or lightning in July of 1934 meant a loss, according to available price statistics, of \$32.20. In July of 1942 an identical cow similarly killed meant a loss of \$88.80; and in July 1943 it meant a loss of \$118.

It is obvious, therefore, that in any period of rising prices an increase in dollar losses may or may not mean an increase in the physical volume of loss.

The present indicated increase in the farm fire loss may apparently be charged in full to change in the price level. It might even plausibly be argued on the evidence at hand that there was some further drop during 1943 in the volume or quantity of farm property destroyed by fire.

IN attempts to explain the recent dollar increase in the farm fire loss, the price factor has often been entirely overlooked. With this factor allowed for, there is apparently no real increase to explain. Nevertheless, the causes cited may be active factors in making the fire loss what it is. Among the factors tending toward an increase are inexperienced and often careless labor on the farm to replace better qualified workers called to the armed forces or attracted to war industries, postponement of needed repairs, neglect of good "housekeeping" in and about the home by reason of the crowded production activity, a bad lightning season in certain parts of the country, and various other factors.

On the other hand, certain forces are at work which should tend to lower fire losses. Among these is the widespread consciousness, which has been stimulated by insurance companies as well as by public agencies, that a fire loss in the present emergency is a

greater disaster than in normal times. Replacement of lost property is difficult, if not impossible, by reason of wartime restrictions and of actual shortages of material as well as of labor. It is now very obviously unpatriotic, as well as reckless from a personal point of view, to tolerate needless physical hazards or acts of carelessness that may bring about loss. Finally, with prices tending strongly upward, the temptation and opportunity for unscrupulous persons to profit by the criminal burning of insured property should for the present be largely absent.

APPARENTLY, during 1943 the various new factors that tended to increase farm fire losses were approximately offset by other new or strengthened factors that tended to reduce them. The result was that while the dollar volume of loss moved up some 12½ percent, the increase was no greater than can be charged entirely to price advances. Hence, farmers may properly take satisfaction from the evidence that, in spite of their mounting difficulties, the farm fire loss in terms of physical property was apparently no greater in 1943 than it was in 1942 and may have been somewhat less.

V. N. VALGREN, *Bureau of Agricultural Economics*

Milking Machines Are War Tools

MILKING machines have played an important part in helping dairy farmers increase wartime milk production to peak levels by making possible increased cow numbers. They have taken the place of men who went to war, and helped those who lacked physical strength and experience to milk by hand. Without these machines many darymen would have long since reduced their cow numbers and turned to lines of production requiring less work.

On January 1, 1942, there were about 253,000 milking machines on

farms. Their usefulness was immediately recognized as a serious labor situation soon developed on dairy farms. Relatively large quotas of materials for milking machines were provided for by the 1942 and 1943 machinery programs, and the number of installations on farms rose to about 330,000 in 1943. An additional net increase of about 40,000 units is in prospect for 1944.

Because of the large purchases of milking machines in the years immediately before the war, a large number of those now on farms are not old.

Table 1.—Labor Savings by Milking Machines of Specified Sizes, United States, February 1943¹

Size of machine ²	Average number of cows milked per herd per day		Labor required per herd per day for—		
	Total including cows milked by hand	With machine only	Machine milking (includes caring for machine)	Milking by hand ³	Labor saved per day by milking machine
	<i>Number</i>	<i>Number</i>	<i>Hours</i>	<i>Hours</i>	<i>Hours</i>
1-cow.....	10.8	9.6	2.07	3.15	1.08
2-cow.....	17.1	15.9	2.67	4.55	1.88
3-cow.....	29.2	27.7	4.11	7.71	3.60
4-cow.....	30.9	29.1	4.62	8.73	4.11
5 and 6 cow.....	50.8	47.1	6.70	13.89	7.19
7 cow and more.....	114.5	105.9	17.28	30.75	13.47

¹ The above material is based largely on information obtained in February 1943 from more than 1,750 crop correspondents who owned milking machines.

² Indicates number of cows that can be milked at 1 time with machine. A 2-cow machine may be 2 single units or 1 double unit.

³ Amount of labor that would have been needed to milk by hand methods the same cows that were machine milked.

On January 1, 1943, about 46 percent of the milking machines were 3 years old or less and 69 percent were 8 years old or less. Only 8 percent were 19 years old or more.

Milking machines are not a new invention. They have been used to some extent in Europe for about 100 years, and in this country for at least 40 years. Their early use in this country was largely experimental, and even in later years their use met with varying degrees of success. Some farmers have used them successfully for many years; others have been dissatisfied with their results, discarded them, and returned to hand milking. Present day machines, however, have been greatly improved over the earlier models. Dairy men have become more proficient in using them, and their increased use in dairy centers has tended to insure better and quicker servicing at more moderate cost.

SANITATION is of prime importance in dairying, and the extensive use of chemicals for cleaning the machines, either with or without hot water, has contributed greatly to the production of milk with low bacterial count. Then, too, many dairy men select replacement cows that are suited

for machine milking, which tends to decrease the time required to milk with machines. Hand stripping after using the machine is considered much less essential than at first; in fact, many dairy men have almost completely eliminated this practice. Moreover, milking time has been reduced greatly as farm experience and experimental data showed that many machines had been left on the cows longer than necessary. Increased attention to these things by the milking machine industry and by State and Federal agencies has contributed much toward instructing farmers in the essentials of machine milking. But labor shortages and increased wage rates have been very important factors in the recent increased use of milking machines.

MILKING machines used under favorable conditions are big labor savers. According to a survey by the Bureau of Agricultural Economics, 75 percent of the machines on farms were used each day in 1942, and the yearly average for all machines was 320 days. Annual usage of milking machines in 1941 was estimated to average 684 hours per machine. This is higher than for any other important farm

machine. The average farm tractor is used only about 500 hours per year, and cream separators, large combines, and manure spreaders are used only about 140 hours each.

The average savings over hand milking for all milking machines reported approximated $2\frac{1}{2}$ hours of labor per day of use, or an annual labor saving of more than 700 man hours per machine.

National labor needs for the milking operation alone are tremendous. The milking job must be performed on more than 4 million farms about twice each day. In 1943 this operation required an average of about 6 million hours each day, or a total of about 2 billion hours for the year. With the machines in use in 1943, labor needs for milking were at least 210 million hours less than would have been needed if all milking had been done by hand.

Labor saved by machine milking varies from farm to farm, depending largely on the size of the machine and the size of the cow herd. Machines adapted for milking only one cow at a time save only slightly more than 1 hour per day of use. Labor savings for other machines tend to vary from

this amount about in direct proportion to the size of the machine (table 1).

The real savings in labor are found in the large dairy herds. Thus, for the popular two-cow machine, daily labor savings were about seven times as high for the largest herds as they were for the smallest herds reported on in the 1943 survey (table 2).

Various milking machine studies indicate that savings in labor for cow herds of less than 10 in number are usually not sufficient to justify the purchase of a machine. There are, of course, some savings in labor but the value of the savings in most instances is probably not sufficient to offset the additional costs involved in operating a machine. However, on some farms, and especially at the present time, consideration other than expense may well be important. Hand milking requires skill and strength if a good job is to be done. With relatively aged or inexperienced workers machine milking may be necessary if the job is to be done, even though relatively high costs for milking are incurred.

FURTHER expansion in the number of milking machines on farms appears to be in prospect, at least

Table 2.—Influence of Herd Size on Labor Saving by Two-Cow Milking Machines, United States, 1943¹

Range in herd size	Average number of cows milked per herd per day		Labor required per herd per day for—		
	Total including cows milked by hand	With machine only	Machine milking (includes caring for machine)	Milking by hand ²	Labor saved per day by milking machine
Number cows milked:	Number	Number	Hours	Hours	Hours
8 and less.....	6.9	6.6	1.35	1.98	0.63
9 to 13.....	11.2	10.6	1.97	3.18	1.21
14 to 18.....	16.0	15.1	2.61	4.35	1.74
19 to 23.....	20.7	19.4	3.05	5.42	2.37
24 to 28.....	25.4	23.5	3.59	6.11	2.52
29 and over.....	33.1	34.5	5.23	9.75	4.52
All herds.....	17.1	15.9	2.67	4.55	1.88

¹ See footnote 1, table 1.

² Amount of labor that would have been needed to milk by hand methods the same cows that were machine milked.

until the farm labor situation becomes more normal. Even in 1943 the number of milking machines on farms in the United States was estimated to be equivalent to about 48 percent of the number of farms having 10 or more cows and heifers kept for milk. (Some farms with less than 10 cows have milking machines, and the percentage of farms with 10 or more cows that actually had machines would be somewhat less than 48.) Milking machines are more numerous in relation to herds of 10 or more cows in the North Atlantic States, the Lake States, and the Pacific Coast States. The great bulk of milking machines are on farms in the commercial dairy areas of these States where fluid milk is sold either for market use or for processing.

RESUMPTION of farm electrification is likely to result in increased use of milking machines in many areas where they are now used to only a limited extent. Better barns and increased attention to machine sanitation will result in better machine performance and probably bring about wider use. For best results machines must be in top working condition. Thorough cleaning and rather frequent servicing is needed to keep them in such condition. It is less expensive to service milking machines in areas where the machines are numerous and close together than in areas where machines are few and widely scattered.

A. P. BRODELL and M. R. COOPER
Bureau of Agricultural Economics

Stabilization of Farm Wages

SINCE November 30, 1942, control of agricultural wage rates has been in the hands of the Secretary of Agriculture and the War Food Administrator. In the regulations of that date agricultural labor was defined so as to exclude all workers engaged primarily in preparing agricultural commodities for market, or in delivering them to market.

Without the approval of the War Food Administrator, farmers, under the regulations, might not decrease wages or salaries paid for a particular kind of work below the highest rate paid for that work between January 1, 1942, and September 15, 1942. Farm wages and salaries might be increased, however, up to the level of \$2,400 per annum without the necessity of securing approval, "unless and until the War Food Administrator determines and gives public notice of his determination, that, with respect to areas, crops, classes of employers or otherwise, increases in salaries or wages for agricultural labor may no longer be made without (his) approval."

The reasons given for placing farm

workers in this special category were (1) "that the general level of salaries and wages for agricultural labor is substandard," (2) "that a wide disparity exists between salaries and wages paid labor in agriculture and salaries and wages paid labor in other essential war industries" and (3) "that the retention and recruitment of agricultural labor is of prime necessity in supplying the United Nations with needed foods and fibres."

DURING the period of more than a year that agricultural wage rates have been under the jurisdiction of War Food Administration, what has been done towards stabilization has been at the insistence of certain groups of producers who were interested primarily in the orderly utilization of the labor supply rather than in taking measures designed to prevent inflation. However, as the 1943 season wore on, it became increasingly clear that in numerous instances, farm wages were rising to such a degree as to cause dislocations in food processing and non-agricultural wage arrangements. The

processing industry has complained about the difficulty of keeping workers in the plants because of the high wages paid in the fields. In November 1943, the Denver War Labor Board issued a resolution stating that uncontrolled increases in farm labor rates made impossible the stabilization of other wage rates. It noted that regular farm labor in Idaho was receiving from \$125 to \$175 per month with house, garden, dairy products, etc., provided free, that common farm labor was frequently receiving \$1 per hour and workers in specialty crops as high as \$1.50 to \$2.10 an hour. Accordingly the Denver Board urged the National War Labor Board either to bring about closer cooperation between the office of the War Food Administrator and the regional war labor boards or to entrust the stabilization of farm wages to the National War Labor Board.

DURING the war, farm wage rates have indeed risen rapidly. In the spring of 1943, the farm wage rates index passed the highest point previously recorded, namely that reached during the 1920 boom period. From an index of 129 percent of the 1910-14 average in July 1940, farm wage rates rose to an index of 280 by October 1, 1943, an increase of 117 percent. The 60-point increase since October 1, 1942, represented the greatest rise ever recorded within a year's time; in the Pacific region the rise was 72 points.

Farm wage rates, however, started from a relatively low level as compared with farm incomes or industrial wage rates and in the second half of 1943 were still "substandard." It is doubtful whether at the end of 1943 the average ratio for the year between farm wage rates and total net farm income will exceed the ratio in 1935-39, a period characterized by large rural and urban unemployment and by restricted migration of farm people to nonfarm areas. Figures of the Bureau of Labor Statistics show that on September 1, 1943, average earnings in all manufacturing industries were 99.3 cents per

hour, \$7.40 per day and \$44.39 per week. At the nearest comparable date for which statistics of the Bureau of Agricultural Economics are available, October 1, 1943, average hourly earnings of hired farm workers were 34.8 cents, average daily earnings were \$3.51 and average weekly earnings were \$17.15. Even the lowest paid of the manufacturing industries, namely cotton goods manufactures and cottonseed crushing, were well above the agricultural wage level. At these same dates, hourly farm wage rates were only 47 percent of the wage paid for common labor in road building in the United States, while daily rates on the farm were only 58 percent of those paid on the roads. The difference was least on the Pacific Coast, in the Mountain States, and in the West North Central States; it was greatest in the East South Central States.

Despite the fact that farm wages as a whole were still "substandard," there were numerous instances of agricultural workers making very high earnings. Such cases were, for the most part, in connection with seasonal operations or those associated with semispeculative ventures. Asparagus cutters and packers in California were making average earnings of \$18 to \$20 a day in April 1943, before the wage stabilization program went into effect. Numerous cases of earnings ranging from \$30 to \$54 a day were reported. In Maine, potato pickers received from \$12 to \$15 a day; similar earnings were reported for such work in North Dakota and Idaho and for bean picking, fruit picking, and topping of sugar beets, elsewhere.

THE situation arising out of the high wage rates paid asparagus workers in the central Delta area of California in the spring of 1943 gave rise to the first wage stabilization program. Wage rates so high as to discourage the harvesting of asparagus were associated with a chaotic condition of the labor market, with

inefficiency on the part of workers and loss of time due to "shopping around" for jobs. "Pirating" of labor by one employer from another was a common cause of dissension within the industry. Wages were out of line with those in other agricultural occupations.

The degree of success attained in the asparagus wage stabilization program, which was instituted on April 12, 1943, led to demands for wage ceilings on the part of growers of other crops, particularly tomatoes and grapes. The results of the asparagus experiment, however, were obviously due, at least in part, to rather special conditions in that industry. Asparagus production for the market was concentrated in five counties in the San Joaquin-Sacramento Delta. The number of growers was relatively small and they were well organized. The work was of a rather specialized sort. The workers were an unusually homogeneous group, some 80 percent of them being Filipinos. Moreover, they were well organized and were employed to a considerable degree under the direction of labor contractors. On the other hand, tomato growing on a commercial scale was carried on in much more widely scattered areas, under widely varying conditions, by growers who were as diverse as agricultural producers could well be, using workers who ranged all the way from high school children to migrants who made a business of following the crops. Yields varied much more than with asparagus. Competition for labor with growers of other crops, especially grapes, was keen.

On August 24, 1943, maximum rates were established for tomato pickers in 13 counties in California. Later, 7 counties were added. On August 26, maximum rates were established for pickers of sun-dried raisin grapes in 8 counties. Finally on October 8, 1943, a ceiling was placed upon rates for cotton picking in 6 counties.

ALTHOUGH detailed reports on the California experience have been issued only with reference to the

asparagus program, it appears that the asparagus, tomato, raisin grape, and cotton programs won general approval. Labor turn-over was reduced. Efficiency of labor on the job was increased. A large part of the canning tomato crop was picked at rates below the ceiling. How much of this was due to the wage stabilization program is an open question. The employment of a considerable number of Mexican nationals in California undoubtedly had an influence.

On November 27, 1943, the Administrator issued an order relating to maximum wage rates for picking oranges, tangerines, and grapefruit in Florida. Hearings were held in the Belle Glade vegetable area in the same State, with a view to setting rates for bean picking; to date no order has been issued.

THE procedure followed in stabilizing agricultural wage rates has differed from that in use in the case of nonagricultural wages. In the latter instance, wages were "frozen" at the point attained on September 15, 1942. Thereafter no wage increases might be made without the specific approval of the War Labor Board, except in the case of wages below a certain minimum (at present 50 cents per hour) which were held to be substandard. The program of the War Labor Board is therefore one of administering changes from a given position, through the application of such principles as the Little Steel Formula, the need for the correction of obsolete and chaotic wage structures, etc. In the case of agricultural wage rates, the application of any such general freeze order encounters insuperable difficulties, owing to the scattered and highly individual nature of farm employment, the informal and unstandardized character of farm employment contracts, farm wage rates and farm jobs, and the fact that on any given date many seasonal tasks would not be in process and would

therefore not be included. At any given date, the prevailing farm wage structure would not provide a sufficiently definite and recognized basis to permit administration of a wage stabilization program like that administered by the War Labor Board in industry.

It appears therefore that a farm wage stabilization program requires the determination by some authority of base stabilization rates for specific operations. These base rates have to be determined in the light of comparable farm rates in the area for other work of similar grade, comparable non-agricultural rates, the amount of perquisites involved, the farm labor supply situation, past levels and trends, growers' ability to pay and other such factors. The base rate must facilitate the obtaining of sufficient labor and yet not be such as to be inflationary.

That this task is a matter of some complexity is obvious. Many different rates and methods of wage payment are to be found for the same operation. Harvest containers vary in size and weight. Compensation may be by the piece, by the hour, by the day or by a combination of these. Bonus payments and the provision of varying amounts of perquisites complicate the situation.

FOR the purpose of carrying out the wage stabilization program, the War Food Administrator has designated State wage boards made up of persons competent to deal with wage questions. In California all four mem-

bers of the boards, and in Florida, three of the five members, are Federal employees. Nominations were sought from the State directors of Extension. In both Florida and California, the War Manpower Commission is represented; in both, too, the Chairman of the State Agricultural War Board is a member; in California he is chairman of the wage board. The wage board has the responsibility of holding hearings to secure evidence with respect to establishing maximum wage rates and of making recommendations to the War Food Administrator. To this board also is delegated authority to make adjustments in cases in which, in its judgment, modification of the Administrator's order is necessary in order to avoid undue hardship. In California such adjustments are made only upon a recommendation to the State board from a county adjustment committee composed of representatives of growers and of laborers. The State wage board also has responsibility for the administration and enforcement of the wage stabilization order. In both California and Florida, these duties are carried out with the active cooperation of the State and county war boards.

It is probable that in 1944 wage boards will be established by the War Food Administration in all States in which there were unduly high farm wage rates in 1943 or in which there is reason to expect that such rates will appear during the coming season.

WILLIAM T. HAM, *Bureau of Agricultural Economics*

Agricultural Transportation Problems

PUBLIC carriers are now hauling the greatest volume of freight in history. Only during the last war did produce hauling approach current heights. While the number of trucks has risen, there are only three-fourths

as many locomotives and freight cars on the rails today as in 1918. The American transportation system is now facing the most severe strain in its existence.

Transportation difficulties grew

markedly from 1942 to 1943. Trucks and rolling stock were a year older, with little prospect of replacement. Only stringent rationing of gasoline to private cars and nonessential trucks allowed adequate fuel supplies for commercial truckers. As the stockpile of natural rubber faded, synthetic tires began to be introduced. As proven adequate for light driving, synthetic tires will be used more and more on commercial trucks but will necessitate lighter truck loadings and gentler treatment on the road. Replacement parts and repair facilities grew scarcer during 1943.

A shift from truck and boat to rail transportation of farm commodities for domestic use continued in 1943. Aside from instances such as the Bari disaster, ocean shipping prospects seemed brighter—largely owing to the successful antisubmarine campaign. Meanwhile, domestic land transportation of farm products became more difficult. Increased agricultural production strained transport facilities. The seasonal peak flows of livestock, and of perishable fruits and vegetables, introduced occasional bottlenecks. In some sections of the southeast where country assembly facilities were inadequate, the disappearance of itinerant truckers made it virtually impossible to haul all of certain fruit and vegetable crops to market.

THE tight supply of rolling stock may be alleviated by the projected construction of at least 30,000 boxcars. The refrigerator-car situation remains troublesome. To some degree, wasteful use of facilities still prevails: cross-hauling, excessively long truck haul, occasional idleness of railroad cars, and the hauling of empties westward were but little reduced in 1943. Farmers operating their own trucks found it difficult to bring their produce to assembly points and markets because of the shortage of help, fuel, mechanics, and replacement parts.

In response to the general pressure on transportation equipment, certain new techniques were developed. Freight cars were more heavily loaded in 1943 than ever before. The holding of refrigerator cars for reconsignment was prohibited wherever possible. To avoid waste, refrigerator cars were loaded with nonperishable produce traveling west to insure a more adequate supply of refrigerated transportation for the western fruit and vegetable crops. Refrigeration was standardized and reduced. Circuitous routing was restricted. Naturally enough, military necessity sometimes compelled abandonment of these economies in transportation service.

PEAK rail movement of cattle and sheep from western ranges into feedlots occurred in October, and the heavy truck movements of hogs to slaughter came in November and December. Truck facilities for livestock were estimated at 80 to 85 percent of those available in the winter of 1942-43. But pick-up service has improved, cross-hauling has decreased, and trucks are more fully loaded. Owing to the reduction in trucks, there has been a shift in livestock movement from truck to rail. The winter peak of livestock marketing is straining railroad capacity. Corollary to this, the transportation bottleneck has tended to make the seasonal livestock marketing period longer than usual. Railroad tonnage is estimated to be 6 percent greater for the winter of 1943-44. There seems to be an adequate supply of refrigerator cars for shipping animal products though not of packer-owned cars alone. To conserve locomotive power, these cars are being loaded more heavily.

Fresh fruits and vegetables, being perishable, demand speedy handling, hauling, and refrigeration en route. Country terminal facilities for fruits and vegetables are generally adequate. Country terminal labor is not an acute problem since most marketing is done by the producers. There has been a

shift away from sales to the vanishing itinerant trucker, and most fresh produce is now sold through country terminal facilities.

Truck transportation in general, and long-distance hauling of fresh fruits and vegetables in particular, grows increasingly difficult. Mechanical breakdown is becoming an ever more important factor in the truck situation. An even greater shift from truck to rail transportation is in the offing. Delivery from major terminals to secondary distribution points is being curtailed, in order to conserve existing heavy truck equipment.

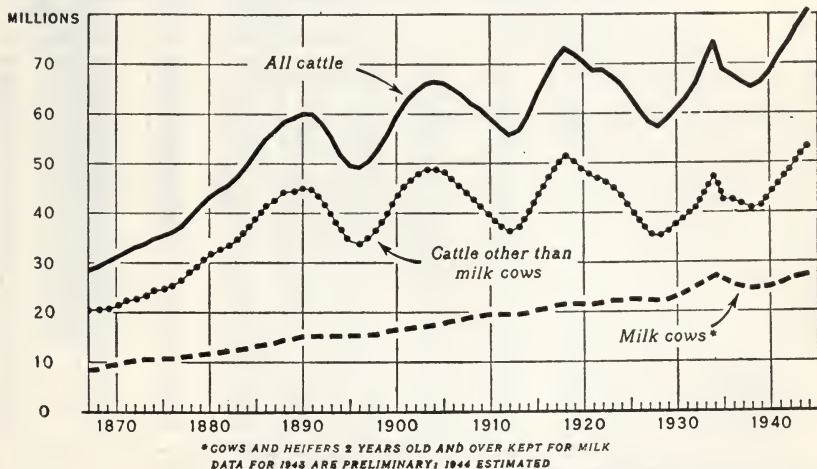
Central market terminal facilities are adequate, for the most part, with labor shortage the most disturbing component. Because of the restricted supply of rail equipment, it is more important than ever to unload cars promptly. This economy of car use is impaired because of the shortage of terminal labor.

Difficulty has also been experienced in the truck delivery of eggs, and in finding a sufficient number of moistureproof boxcars for the preservation of grain in transit. Boom production of crops, such as the record 1943 potato season, has caused a serious shortage of storage facilities. When a large portion of the Maine crop must be transported by rail to storage locations before it is marketed, added strain is located on the railroads.

WHILE so vital a product as food has a high priority on transportation space, 1944 will see as many food transportation difficulties as in 1943. The 30,000 new boxcars may allow some easing of the rolling stock situation, but most factors of the transportation problem have a gloomier outlook.

A. PETER RUDERMAN, *Bureau of Agricultural Economics*

**ALL CATTLE: NUMBER ON FARMS JANUARY 1,
UNITED STATES, 1867-1944**



Economic Trends Affecting Agriculture

Year and month	Industrial production (1935- 39=100) ¹	Income of in- dustrial workers (1935- 39=100) ²	Cost of living (1935- 39=100) ³	1910-14=100					Prices paid, interest and taxes	Farm wage rates
				Whole- sale prices of all com- modi- ties ⁴	Prices paid by farmers for commodities used in—					
					Living	Pro- duction	Living and pro- duction			
1925.....	90	126	125	151	163	147	156	169	176	
1926.....	96	131	126	146	162	146	155	168	179	
1927.....	95	127	124	139	160	144	153	166	179	
1928.....	99	126	123	141	160	148	155	168	179	
1929.....	110	134	122	139	159	147	154	167	180	
1930.....	91	110	119	126	150	141	146	160	167	
1931.....	75	84	109	107	128	123	126	142	130	
1932.....	58	58	98	95	108	109	108	124	96	
1933.....	69	61	92	96	108	108	108	120	85	
1934.....	75	76	96	109	122	123	122	129	95	
1935.....	87	86	98	117	124	127	125	130	103	
1936.....	103	100	99	118	123	125	124	128	111	
1937.....	113	117	103	126	128	136	131	134	126	
1938.....	89	91	101	115	122	125	123	127	125	
1939.....	109	105	99	113	120	122	121	125	123	
1940.....	125	119	100	115	121	124	122	126	126	
1941.....	162	169	105	127	131	131	131	133	154	
1942.....	199	238	116	144	154	149	152	151	201	
1942 October.....	215	262	119	146	158	151	155	154	220	
November.....	220	271	120	146	160	151	156	155	-----	
December.....	223	278	120	147	162	153	158	156	-----	
1943 October.....	⁵ 247	318	124	150	172	167	170	166	280	
November.....	245	-----	124	150	173	168	171	167	-----	
December.....	-----	-----	-----	-----	174	170	172	168	-----	

Year and month	Index of prices received by farmers (August 1909-July 1914=100)								Ratio, prices received to prices paid, interest and taxes
	Grains	Cotton and cotton-seed	Fruits	Truck crops	Meat animals	Dairy products	Chickens and eggs	All groups	
1925.....	157	177	172	153	141	153	163	156	92
1926.....	131	122	138	143	147	152	159	145	86
1927.....	128	128	144	121	140	155	144	139	84
1928.....	130	152	176	159	151	158	153	149	89
1929.....	120	144	141	149	156	157	162	146	87
1930.....	100	102	162	140	134	137	129	126	79
1931.....	63	63	98	117	92	108	100	87	61
1932.....	44	47	82	102	63	83	82	65	52
1933.....	62	64	74	105	60	82	75	70	58
1934.....	93	99	100	103	68	95	89	90	70
1935.....	103	101	91	125	117	108	117	108	83
1936.....	108	100	100	111	119	119	115	114	89
1937.....	126	95	122	123	132	124	111	121	90
1938.....	74	70	73	101	114	109	108	95	75
1939.....	72	73	77	105	110	104	94	92	74
1940.....	85	81	79	114	108	113	96	98	78
1941.....	96	113	92	144	141	131	122	122	92
1942.....	119	155	125	199	189	152	151	157	104
1942 October.....	117	158	134	226	200	165	173	169	110
November.....	117	160	127	238	197	171	178	169	109
December.....	124	162	151	293	196	175	183	178	114
1943 October.....	162	171	197	264	203	157	212	192	116
November.....	163	165	207	295	192	190	217	192	115
December.....	170	168	231	245	192	191	210	197	117

¹ Federal Reserve Board, adjusted for seasonal variation. Revised November 1943.

² Total income, adjusted for seasonal variation. Revised March 1943.

³ Bureau of Labor Statistics.

⁴ Bureau of Labor Statistics index with 1926=100, divided by its 1910-14 average of 68.5. ⁵ Revised.

NOTE.—The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is intended to measure volume, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income, since output can be increased or decreased to some extent without much change in the number of workers.